## **PCT**

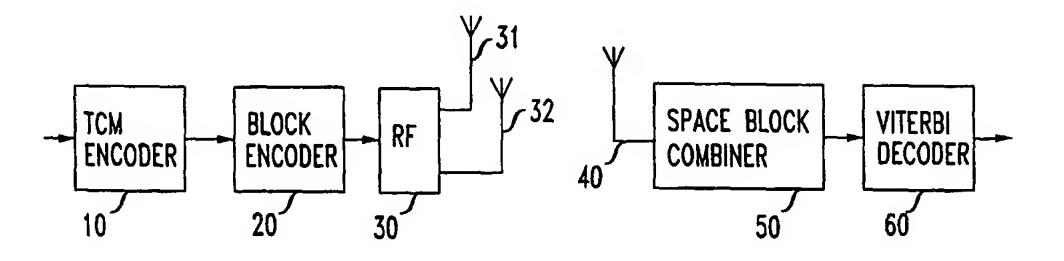
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(30) Priority Data: 60/063,794 08/167,422 31 October 1997 (31.10.97) 6 October 1998 (06.10.98)  (71) Applicant: AT & T WIRELESS SERVICES, INC. 5000 Carillon Point, Kirkland, WA 98033 (US).  (72) Inventor: ALAMOUTI, Siavash; 11415 Juanita Data	י ט'/צטן	(88) Date of publication of the international search report: 8 July 1999 (08.07.99)
Kirkland, WA 98034 (US).  (74) Agents: DWORETSKY, Samuel, H. et al.; AT & T C Box 4110, Middletown, NJ 07748 (US).		

(54) Title: MAXIMUM LIKELIHOOD DETECTION OF CONCATENATED SPACE-TIME CODES FOR WIRELESS APPLICATIONS WITH TRANSMITTER DIVERSITY



#### (57) Abstract

Good transmission characteristics are achieved in the presence of fading with a transmitter that employs a trellis coder followed by a block coder. Correspondingly, the receiver comprises a Viterbi decoder followed by a block decoder. Advantageously, the block coder and decoder employ time-space diversity coding which, illustratively, employs two transmitter antennas and one receiver antenna.

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C. DOCUM	ENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of	the relevant passages	Relevant to claim No.
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X Fur	ther documents are listed in the continuation of box C.	Patent family members are listed	in annex.
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